UST NEWS

SC DHEC

September 2003

Don't Get Rusty

Thomas Mimms, Compliance Inspector

One important job of a tank owner/operator is to maintain a tank system that is protected from corrosion. One way to provide corrosion protection is with cathodic protection. Over the past year, the compliance team has surveyed nearly 600 cathodic protection systems at UST facilities across the state. The survey showed only about half of these systems were providing sufficient protection against corrosion. This article provides hints and pitfalls for maintaining cathodic protection systems.

Cathodic protection systems come in two types: galvanic systems and impressed current systems. Owner/operator maintenance on a galvanic system is pretty simple. The system requires a test by a certified tester at least once every three years and within six months of any repairs to the tank system. On the other hand, operation and maintenance for an impressed current system should cover several items. First, electrical power to the system must be continuous, even if the tanks are not in use. Written records showing rectifier inspections done every 60 days are good indicators of continuous operation. The records should include the amperage and voltage readings as well as the date and the initials of the person who did the inspection. This inspection can also help the owner/operator spot major changes in system performance over time and warn that the system may not be functioning properly. Owners and operators should also conduct a routine physical inspection of impressed current systems (at least monthly) to spot damage to the system. Like the galvanic system, impressed current systems also need a three-year test of system performance.

Even the simplest cathodic protection is not a "set it and forget it" kind of thing. Owners have to take an active part in operating and testing these devices so tank systems won't get "rusty."

The "Codes and Standards" article in our last issue may have implied incorrectly that local jurisdictions in South Carolina could OK a credit card operation for fuel dispensing at an unmanned facility. The State Fire Marshal's Office has ruled that this kind of operation is NOT LEGAL in South Carolina. Local jurisdictions CANNOT be less stringent than the State Fire Marshal's Office.

Tank Gauge Blues

John Kneece, Compliance Section

For automatic tank gauges (ATGs) to successfully perform in-tank leak tests, the tank must contain a minimum amount of product. When an ATG attempts a test without enough product in the tank, a Low Level Test Error or Test Invalid result can occur. These results are not successful release detection monitoring with an ATG. And, failure to successfully monitor the tank for releases can lead to an undetected release, or at best, a requirement to conduct precision tank testing.

There are several things owners and operators can do to increase the odds of having a successful ATG test each month on each tank. One way is to know how much fuel is needed for the ATG to conduct a successful test and to manage product delivery so that a successful test is possible on the day(s) the ATG is programmed to test the tank. Another way to increase the odds for a successful test is to program the ATG to perform leak tests more often, increasing the chances that a test will occur when there is sufficient product in the tank for a

Continued on page 2

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

CR-004160 MAC 9/03

Newsletter printed on recycled paper.

Inside....

Continued from page 1

successful test. Another option is to manually begin a leak test with the ATG on the day after a fuel delivery. Deliveries or dispensing cannot occur while the test is running (typically two to four hours), and most testing should occur at least a day after a delivery to allow temperatures in the product to stabilize. Routinely monitoring the results of the ATG tests can help the owner discover low level test errors and take corrective actions before it is too late. If you have questions about automatic tank gauges and low-level testing, call the Compliance Section.

Do I Need To Keep This?

Rebecca Lindler, Compliance Section

In the South Carolina Underground Storage Tank Control Regulations, Paragraph 280.45 explains the record-keeping requirements for release detection. Records must be maintained for regulated tanks that are currently in use, out of use, or permanently closed.

For tanks that are currently in use, any records pertaining to sampling, testing or monitoring should be kept for at least 12 months. Records covering the most recent 12 months of operation should always be available. However, the results of tank tightness testing, line tightness testing, or line leak detector function checks should be maintained until a new test is conducted. Since tank tightness testing is required every 5 years in conjunction with inventory control, owners who are using inventory control and monthly reconciliation as a release detection method should keep the tank tightness test results for five years or until the next test, whichever is sooner. For example, the owner may have conducted precision testing to investigate fails on monthly monitoring or inventory control. These new testing records become the ones to keep until the next test is conducted.

Tanks that have less than 1 inch of product in them and that meet the corrosion protection standard are considered out of use and have different requirements for release detection records. For these systems, records covering the most recent 12 months of operation must be maintained while the system is out of use and then new records cycled into the file when the system is returned to service. For example, if tanks were taken out of use in December 2001, the owner would maintain the records for December 2000 through November 2001 for as long as tanks are out of use, and when tanks are put back into use, for one year along with the new release detection records.

For tanks that are permanently closed, either removed from the ground or filled in place, the release detection records for the most recent 12 months of operation must be maintained with the results of the site assessment.
Maintenance records, such as calibration or repair of release detection equipment, must be maintained for a period of one year after the work is completed. After new equipment has been installed, all written performance claims from the manufacturer along with the schedule for calibration and maintenance must be maintained for five years. Record keeping can be tricky. Owners and operators often struggle to answer the question, "Should I keep this or not?" One approach is to keep everything forever; a better approach is to call the UST Compliance Section at 1-800-826-5435 or 803-896-6240.

Pitt Stop 26 – Environmental Excellence Award

This quarter the Environmental Excellence Award goes to Pitt Stop 26, 784 West Highway 278, Lexington. The facility has been in compliance during each of its annual inspections since its current owner and operator, Bob Brandi Stations, purchased the site in 1998. The local inspector for this facility, Alison Hall, commends the site for having current and complete release detection records in addition to well-maintained equipment. Other facilities nominated were:

- Tiger Express 2, Brunson
- Kelley's Texaco, Greenwood
- Petro Express #14, Rock Hill
- W T Owens & Sons, Hemingway
- Fort Jackson POL, Fort Jackson
- Union School Bus Shop, Union
- Solo, Wedgefield

Sellers, Please Help

Leslie Yasinsac, Compliance Inspector

Owners who are planning to sell a UST facility can help make the transition easier for the buyer. In many instances, the present owner could be the best source of compliance information for a new owner. New owners are often not aware of things like the requirement to fill out and send in a Transfer of Ownership. A copy of this form is available from the Regulatory Compliance Division in the Columbia office or from the DHEC Web site. Secondly, the present owner could alert the new owner to the need for proof of Financial Responsibility (FR). The UST Program will ask the new owner to provide documentation of FR coverage within 10 days. Again, if there are any questions, the Regulatory Compliance Division can help. Finally, the present owner should provide copies of release detection and testing records as well as the operations and maintenance records for the facility. By prompting the new owner and providing needed documentation, the seller can smooth the way for a new owner to remain in compliance.

My Cleanup is Air Sparging or SVE

Art Shrader, Director, Assessment and Corrective Action Division

While there are several methods for cleaning up petroleum contamination, more than half of all petroleum cleanups include pumping air into, or vacuuming air out of, the soil and groundwater. These cleanup methods are known as air sparging and soil vapor extraction (SVE). Though the equipment is different, both methods reduce contamination by removing petroleum concentration in the vapor phase from the groundwater or soil. The increased airflow also provides more oxygen to the microbes in the groundwater and soil and encourages “bio” clean up (see last quarter’s issue of UST News).

In the early 1990s, air sparging and SVE were added to existing groundwater pump and treat systems with great success. They used cheaper equipment than the pump and treat method, do not require a discharge permit, and do not require a daily system inspection by a licensed wastewater treatment operator.

By 1997 air sparging and SVE were the cleanup methods of choice for petroleum contamination in soil and groundwater. Today, the old pump and treat method is used at less than 5 percent of cleanup projects in South Carolina. On the other hand, air sparging and SVE alone or in combination with other technologies are used at about 65 percent of UST site cleanups in South Carolina.

Air sparging and SVE do not work for all cleanup situations. For example, air forced into free phase product breaks up the product and spreads it, making cleanup more difficult. So air sparging is not effective until levels of free phase product are reduced or eliminated. For the method to work best, the moving air must contact the petroleum contamination. In soil with high clay content or pockets of rock and clay, air may not reach some areas, and the process will not be effective. Additionally, SVE does not work very well if groundwater is near the land surface or if the groundwater level rises and groundwater is sucked into the vapor extraction system. However, when geological conditions are right, a properly installed air sparging or SVE system can evaporate large volumes of petroleum contamination and effectively clean up both soil and groundwater.

UST NEWS STAFF

Editor: Robin Mack

Publishing Editor: Rebecca Lindler

Distribution: Rebecca Lindler

Contributing Staff:

Thomas Mimms, John Kneece, Art Shrader, Leslie Yasinsac, Christa Jordan, Rebecca Lindler, Tanitra Marshall

(803) 896-6240

Fax (803) 896-6245

http://www.scdhec.net/ust

Tired of that Tank? Extended Out-of-Use Status Explained

Christa Jordan, Compliance Inspector
Tanitra Marshall, Compliance Inspector

A tank that is temporarily out of use can be maintained indefinitely by doing seven simple things:

1. Empty tank(s) to 1 inch or less of product. As always, SAVE YOUR PAPERWORK. A manifest letter showing the date the tank was emptied, the amount emptied, the amount of product remaining in the tank, and the company that performed the service should be obtained.

2. Notify the UST Program of the change in status.

3. If the UST system is closed for three months or more, leave vent lines open and functioning, and cap and secure all other lines, pumps, manways and ancillary equipment.

4. Maintain appropriate release detection records. For tank systems temporarily closed, records for the most recent 12 months of operation must be maintained for one year after taking the system out of temporary closure and returning regulated substances to the system or for tank systems permanently closed, records for the most recent 12 months of operation must be maintained with the results of the site assessment. The results of the assessment must be maintained for at least three years after completion of permanent closure or change-in-service.

5. Maintain tank registration fees and certificate. Annual registration fees are assessed on each tank until it is properly abandoned. The tank registration certificate should be posted on site.

6. Maintain Financial Responsibility. Keep the Financial Responsibility Certificate on site.

7. Maintain Corrosion Protection (see related article, “Don’t Get Rusty”). For tanks that were upgraded with only an internal lining, the tank will need an internal inspection of the lining done 10 years after lining installation and every 5 years thereafter.

That's it! With minimum monthly activities (cathodic protection) and no annual testing, the tank system can remain in extended out of use status until you decide to either return it to service or properly abandon it. Returning an out of service tank to service can be as easy as performing tightness tests to ensure it's still sound, but the best thing to do is to contact the UST Compliance Section for guidance to either return the tank system to service or abandon it.

Tank Doctor

Leslie Yasinsac, Compliance Inspector

No major newsletter is complete without an advice column. “UST News” is no different. What advice do tanks need? None, but UST owners and operators have lots of questions. Now UST owners and operators can get timely advice through e-mail from the Tank Doctor! All questions will be answered directly, and the most common or meatiest ones will be answered in the “UST News.” The Tank Doctor promises professional confidentiality (names will NOT appear in the Tank Doctor column). So, e-mail UST questions to UST_HELP@dhec.sc.gov. The (Tank) Doctor is in!

Return Service Requested

Underground Storage Tank Program
SCDHEC
2600 Bull Street
Columbia, SC 29201

UST NEWS